

CLAIMS

5 ~~1/~~ A method for treating a patient with autochthonous prostate cancer comprising
intravenous administration of a solution of Rhodamine-123 in ethyl alcohol and water in an
amount sufficient to effect *in vivo* destruction of prostate cancer cells.

10 ~~2/~~ A method for treating a patient with prostate cancer and having a PSA level
above about 5, the method comprising measuring the PSA level in the blood of the patient,
administering Rhodamine-123 to the patient in an amount sufficient to effect *in vivo*
destruction of prostate cancer cells, and thereafter measuring the patient's PSA level to
confirm the destruction of prostate cancer cells in the patient.

15 3. A method according to claim 1 which includes the step of measuring the
patient's PSA level before and after treatment, and administering sufficient Rhodamine-123
to substantially decrease the level of PSA in the blood of the patient.

20 4. A method according to claim 1 or 3 which includes injecting the solution in
a volume of about 250 ml.

5. A method according to claim 1, 2, or 3 in which the administration of
Rhodamine-123 is completed within about four hours.

25 6. A method according to claim 1, 2, or 3 in which the patient is treated with up
to about 30 mg Rhodamine-123 per kg of body weight every other day.

7. A method according to claim 1, 2, or 3 in which the patient is treated with
between about 0.2 and about 15 mg of Rhodamine-123 per kg of patient body weight.

30 8. A method according to claim 1, 2, or 3 in which the patient is administered the
solution of Rhodamine-123 at intervals of at least 24 hours, and in increasing amounts until
the patient exhibits evidence of toxicity due to the Rhodamine-123, and thereafter
administering Rhodamine-123 to the patient in an amount and at a rate less than that which
35 causes toxicity.

~~9.~~ A solution for treating a patient with prostate cancer, the solution comprising ethyl alcohol and an effective amount of Rhodamine-123 dissolved in water.

10. A solution according to claim 9 which includes dissolved sugar susceptible to metabolic assimilation.

10 11. A solution according to claim 10 in which the sugar is selected from the group consisting of dextrose, glucose, and fructose.

12. A solution according to claim 10 or 11 in which the sugar is present by an amount equal to about 5% by weight.

15 13. A solution according to claim 9, 10, or 11 in which the ethyl alcohol is present in an amount between about 0.2% and about 5% by volume.

~~14.~~ A stock solution for preparing an administration solution for treating prostate cancer, the stock solution comprising Rhodamine-123 dissolved in ethyl alcohol.

20 15. A stock solution according to claim 14 in which the solution contains about 95% ethyl alcohol by volume and about 5% sterile water by volume.

25 16. A solution according to claim 14 or 15 in which the Rhodamine-123 is present in an amount between about 4 and about 25 mg/ml of solution.

30 ~~17.~~ A method for treating a patient with prostate cancer and having a PSA level above about 5, the method comprising oral administration of Rhodamine-123 in a pill which releases the Rhodamine-123 for absorption by the patient, and in an amount sufficient to effect *in vivo* destruction of prostate cancer cells in the patient, measuring the patient's PSA level after treatment, and thereafter administering Rhodamine-123 to the patient at a rate sufficient to substantially decrease the patient's PSA level.

35 18. A method according to claim 17 in which the pill releases between about 0.2 and about 30 mg of Rhodamine-123 per kg of patient body weight.

19. A method according to claim 17 or 18 in which the Rhodamine-123 is released within between about 2 and about 24 hours.

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~~20.~~ A method for treating a patient with prostate cancer comprising dissolving Rhodamine-123 in a solvent which includes ethyl alcohol to form a stock solution, diluting the stock with water to form a treatment solution which includes Rhodamine-123, water and ethyl alcohol, and administering the treatment solution to the patient in an amount sufficient to effect *in vivo* destruction of prostate cancer cells.

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21. A method according to claim 20 which includes the step of measuring the patient's PSA level before and after treatment, and administering sufficient Rhodamine-123 to substantially decrease the level of PSA in the blood of the patient.

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22. A method according to claim 20 or 21 which includes injecting the treatment solution intravenously.

23. A method according to claim 20 or 21 in which the stock solution contains between about 4 and about 25 mg of Rhodamine-123 per liter.

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24. A method according to claims 20 or 21 in which the treatment solution contains between about 0.2% and about 5% ethyl alcohol by volume.

~~25.~~ A method for treating a patient with prostate cancer and having a PSA level above about 5, the method comprising measuring the prostate specific acid phosphatase level in the blood of the patient, administering Rhodamine-123 to the patient in an amount sufficient to effect *in vivo* destruction of prostate cancer cells, and thereafter measuring the patient's prostate specific acid phosphatase level to confirm the destruction of prostate cancer cells in the patient.

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26. A method according to claim 25 which includes the step of measuring the patient's prostate specific acid phosphatase level before and after treatment, and administering sufficient Rhodamine-123 to substantially decrease the level of prostate specific acid phosphatase in the blood of the patient.

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27 A method for treating a patient with prostate cancer comprising dissolving Rhodamine-123 in a solvent which includes ethyl alcohol to form a stock solution, diluting the stock with water to form a treatment solution which includes Rhodamine-123, water and ethyl alcohol, administering the treatment solution to the patient in an amount sufficient to effect *in vivo* destruction of prostate cancer cells, measuring the patient's prostate specific acid phosphatase level before and after treatment, and administering sufficient Rhodamine-123 to substantially decrease the level of prostate specific acid phosphatase in the blood of the patient.

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